

Comparing Student Perceptions of the Classroom Climate Created by U.S. American and International Teaching Assistants

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Abstract: Previous studies have revealed that American undergraduate students complain about International Teaching Assistants' (ITAs) lack of English proficiency and rate ITAs lower than American Teaching Assistants (ATAs) on teaching evaluations. This study investigates student perceptions of classroom climate to discover how ITAs might overcome students' ethnocentric preconceptions. Survey results from 485 undergraduate students found that student perceptions of classroom climate differed significantly with ITAs as compared to ATAs. Student perceptions of classroom climate also differed significantly by the biological sex of the student. The biological sex of the TA did not have a significant impact on student perceptions of classroom climate.

Keywords: International teaching assistants, American teaching assistants, undergraduate students, classroom climate, teaching evaluations

Introduction

Many universities and colleges across the United States rely on Teaching Assistants (TAs) to instruct undergraduate courses (Buerkel-Rothfuss & Gray, 1990; Kendall & Schussler, 2012), and the number of International Teaching Assistants (ITAs) has increased (Christian & Rybarkzyk, 2013; Gorsuch, 2003). This growing reliance on ITAs has been accompanied by student complaints, as American undergraduates have rated ITAs less favorably than American Teaching Assistants (ATAs) on teaching evaluations at both beginning and end of the semester (Jiang, 2014, Smith, Strom, & Muthuswamy, 2005; Trice, 2003). In response, there have been calls to strengthen English proficiency requirements and establish rigorous orientation training programs for ITAs (Fox & Gay, 1994; Gorsuch, 2003, 2011; Gorsuch, Meyers, Pickering, & Griffiee, 2010; Hoekje & Williams, 1992; Nicklow, Marikunte, & Chevalier, 2007; Smith, Boyd, Nelson, Barrett, & Constantinides, 1992), but such efforts do little to remedy student perceptions based upon ethnocentric preconceptions of ITAs' accent or country of origin - regardless of their level of

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English proficiency (Kang, 2012; Yook, 1999). Yet, from the scant literature on the subject, it is evident researchers have neglected to examine if student perceptions of the classroom climate created by ITAs differs from ATAs. If perceptions of classroom climate differ, then it would be reasonable to conclude that negative student evaluations of ITAs are based on some discernable differences in approaches to instructions. If, however, perceptions of classroom climate do not differ, then it stands to reason that negative student evaluations of ITAs are triggered by other issues. Thus, the purpose of the present study is to examine possible differences in student perceptions of the classroom climate created by ITAs as compared to ATAs.

Literature Review

Classroom climate can be defined as learning environment established by instructors in the classroom (Hirschy & Wilson, 2002). Climate is perception-based and reflects how welcome, supported, and comfortable students feel in a given instructor's classroom. Sidelinger, Bolen, Frisby, and McMullen (2012) observed that "a positive climate and sense of belonging influence students' perceptions of a supportive community in the college classroom" (p. 293-294). A supportive climate can also motivate students to communicate with their instructors (Myers & Claus, 2012). Given that previous climate studies have focused solely on instructor behaviors, the next logical question is whether instructor demographics (ATAs vs. ITAs) might also influence perceptions of climate. Investigating classroom climate could determine if differences in student evaluations of ATAs and ITAs are based on classroom experiences and approaches to teaching or some other issue.

Although there is limited data comparing how undergraduate students rate ITAs versus ATAs, research suggests American undergraduates generally rate ITAs lower than ATAs on teaching evaluations (Smith et al., 2005), complain about ITAs, and report confusion and misunderstanding in classes instructed by ITAs (Clayton, 2000; Fitch & Morgan, 2003; Smith et al., 1992; Tyler, 1992). It was also found that lower Test of English-as-a Foreign Language (TOEFL) and Graduate Record Examination (GRE) verbal scores are related to more negative student evaluations of ITAs (Yule & Hoffman, 1990). However, the level of English proficiency alone cannot account for students' low receptivity of ITAs (Bresnahan & Kim, 1993a). Paige (1990) found that ITAs whom students perceive as vastly different from American culture are evaluated more negatively. Nelson (1990) concluded that ITA pronunciation was not a major cause of, or solution to, ITA-student misunderstandings. Yook (1999) attributed student complaints to cultural insensitivity, intolerance, and ethnocentrism. Bresnahan and Kim (1993b) found that the majority of American undergraduates were reluctant to be in a less powerful position in relationships with foreigners, which could indicate that students' existing attitude toward foreigners is a reason for their resistance to ITAs.

Differences in student evaluations of ITAs and ATAs might be indicative of the various instructional approaches and teaching styles used by ITAs and ATAs. Jenkins (1997) found that ITAs are more concerned about maintaining face than ATAs. Lieberman (1997) compared Chinese and U.S. university instructors, and discovered that U.S. university teachers exhibit greater individualist/direct behaviors and more small power distance/personal behaviors with their students, whereas Chinese teachers exhibit greater collectivistic/indirect behaviors and more power distance/contextual behaviors. American students rated foreign-born instructors high in subject area competence and knowledge, social skills like empathy, friendliness, interaction, and respect for students; but, ratings were not as favorable with regard to teaching or communication effectiveness (Neves & Sanyal, 1991). Neves and Sanyal found students with higher grade point

averages (GPAs) and previous exposure to ITAs, as well as non-white and older students, usually evaluated ITAs more positively than other students.

Given that previous studies indicate that students rate ITAs lower on course evaluations than ATAs (Paige, 1990; Smith et al., 2005), harbor ethnocentric preconceptions (Bresnahan & Kim, 1993b; Yook, 1999), and express complaints more frequently about ITAs (Clayton, 2000; Fitch & Morgan, 2003; Smith et al., 1992; Tyler, 1992), it is reasonable to wonder if students might also perceive differences in the classroom climate created by these two groups of TAs. Also, cultural differences in approaches to instruction between these groups of TAs (Jenkins, 1997; Lieberman, 1997) would also suggest that ITAs and ATAs may establish climate in very different ways. Therefore, the following hypothesis was advanced in the present study:

H: Student perceptions of classroom climate will differ significantly with ITAs as compared to ATAs.

Previous findings suggest that differences in ITA's biological sex impacts student perceptions, as male ITAs tend to receive more negative comments than do females (Fitch & Morgan, 2003). But, no biological sex differences among undergraduates have been found to influence perceptions, as female and male students tend to perceive their ITAs' teaching ability, social skills, and knowledge similarly (Neves & Sanyal, 1991). In this study, the researchers further investigated the biological sex differences of TAs and undergraduates in relation to climate:

RQ₁: Do student perceptions of classroom climate differ significantly based on the sex of their TA?

RQ₂: Do student perceptions of classroom climate differ significantly based on the sex of the student?

Methodology

Participants and Procedures

Participants consisted of 485 undergraduates at a large Midwestern university, enrolled in 25 randomly selected sections of communication studies courses. As the courses were public speaking classes, which fulfilled general education requirements, the students represented a wide range of majors from each of the 10 colleges on campus. First-year students comprised 42.1% of the participants, followed by sophomores (29.7%), juniors (19.8%), and seniors (8.5%). Most were female ($n = 261$; 53.8%), while 46.2% ($n = 224$) were male. The mean age was 19.50 years of age ($SD = 1.47$). Most were Caucasian (93.2%), while fewer were African American (3.1%), bi-racial or mixed (1.2%), Latino/Latina (.8%), Asian Pacific Islander (.8%), or other (.8%). An average GPA for the previous term of 3.16 ($SD = .56$) was reported.

Students completed a survey with either an ITA or an ATA from a previous term in mind, producing data for a large cross-section of TAs from a variety of disciplines. Participants reported previously having an average of 1.29 ($SD = 1.48$) classes with ITAs, with a range from 0 to 12. The distribution of students indicating they were completing the survey with an ITA ($n = 256$; 53.2%) or ATA ($n = 225$; 46.8%) in mind was relatively even. A slight majority of TAs selected by participants were male ($n = 245$; 51.1%), while 48.9% ($n = 234$) were female. Students completing

the survey with an ITA in mind identified 37 different countries and/or continents of origin, with no single nationality garnering more than 13% of the total.

Measurement

A survey, containing a Classroom Climate Measure and demographic items, was given to undergraduates. The Classroom Climate Measure contained items adapted from a general climate scale by Gokcora (1989) and the Cultural Learning Environment Questionnaire (CLEQ) by Waldrup and Fisher (2000). The CLEQ produced reliability coefficients between .69 and .90 with acceptable factor loadings (Waldrup & Fisher, 2000). No factor analysis or scale reliabilities were reported by Gokcora. Neither the Gokcora scale nor the CLEQ addressed the particular cultural dimensions and TA status of instructors necessary to answer questions posed in our study. Thus, adapting selected items from both scales permitted a more precise operationalization of the variables of interest. Separate factor analyses, employing principal axis factoring with varimax rotation, and reliability procedures were run for each adapted climate scale used in the present study.

Items adapted from Gokcora (1989) were analyzed through factor analysis and reliability procedures. Bartlett's Test of Sphericity suggested that the data met assumptions necessary for factor analysis, $\chi^2 = 1125.45$ (23), $p < .001$. Based on the scree plot and eigenvalue scores, two factors were retained: *Atmosphere* and *Teaching Methods*. *Atmosphere* consisted of five items asking about: (a) the comfort level they felt when talking with their TA; (b) how tense or relaxed the TA's classroom atmosphere was; (c) how judgmental/open-minded their TA was in class discussion; (d) how equally/unequally the TA treated each student; (e) and how indifferent/sympathetic their TA was to students' problems. *Teaching Methods* consisted of three items asking: whether their TA used more lectures or discussions, how serious/humorous the examples that their TA used were, and how dull/exciting their TAs' teaching methods were. The two factors collectively accounted for 58.93% of the variance in the scale. Reliability estimates were .82 (*Atmosphere*), and .61 (*Teaching Methods*), respectively.

Items adapted from the CLEQ were analyzed through factor analysis and reliability procedures. The Bartlett test of sphericity suggested that the data met assumptions necessary for factor analysis, $\chi^2 = 1423.25$ (45), $p < .001$. Based on the scree plot and eigenvalue scores, three factors were retained: *Teacher Authority*, *Deference*, and *Equity*. *Teacher Authority* consisted of two items asking how vital it was to: answer all the questions their TA asked and give the right answers to questions. *Deference* consisted of five items asking: whether they liked asking their TA questions that might be hard to answer, whether they felt that they could challenge or question what their TA said, whether they liked to question what their TA told them, whether they felt free to disagree with their TA, and whether they felt free to argue with their TA. *Equity* consisted of three items asking whether students: thought both females and males made excellent TAs, liked being taught by both male and female TAs, and felt that female TAs should be shown the same amount of respect as male TAs. The three factors collectively accounted for 63.70% of the variance in the scale. Reliability estimates were .84 (*Teaching Authority*), .79 (*Deference*), and .75 (*Equity*), respectively.

Results

A three-way MANOVA was calculated due to the presence of multiple and related dependent and independent variables. The five classroom climate factors served as dependent variables, while TA type (i.e., ITA versus ATA), TA sex, and student sex were entered as

independent variables. Alpha was set to .05 level for all tests. MANOVA results indicated a significant interaction effect, Pillai's Trace = .30, $F(5, 443) = 2.71$, $p < .05$, $\eta^2 = .03$.

The hypothesis posited that student perceptions of classroom climate would differ significantly based on the type of TA (ITA versus ATA). There was a significant main effect for differences in TA type on the climate measure, Pillai's Trace = .13, $F(5, 443) = 12.66$, $p < .05$, $\eta^2 = .13$. Univariate follow-up tests indicated significant differences for four climate factors: Atmosphere, $F(1, 447) = 16.23$, $p < .05$, $\eta^2 = .04$, Teaching Methods, $F(1, 447) = 54.41$, $p < .05$, $\eta^2 = .11$, Deference, $F(1, 447) = 5.23$, $p < .05$, $\eta^2 = .01$, and Equity, $F(1, 447) = 9.86$, $p < .05$, $\eta^2 = .02$. American undergraduate students have more favorable perceptions of the atmosphere, teaching method, deference, and equity in ATAs' classrooms than in ITAs' classrooms. Teacher Authority was not significantly different. Table 1 provides descriptive statistics.

RQ1 asked whether student perceptions of classroom climate would differ significantly based on the sex of TA (male versus female). No significant main effect was found for TA sex differences on the Classroom Climate Measure, Pillai's Trace = .02, $F(5, 443) = 1.40$, $p > .05$, $\eta^2 = .02$. Table 2 provides descriptive statistics.

RQ2 examined whether student perceptions of classroom climate would differ significantly based on the sex of student (male versus female). There was a significant main effect for student sex differences on the Classroom Climate Measure, Pillai's Trace = .05, $F(5, 443) = 4.77$, $p < .05$, $\eta^2 = .05$. Univariate follow-up tests for indicated significant differences for one climate factor: Deference, $F(1, 447) = 14.40$, $p < .05$, $\eta^2 = .03$. Male undergraduate students rated deference higher than female students. The remaining factors were not significantly different. Table 3 provides descriptive statistics.

Decomposition of the significant interaction effect indicated that female students perceived the classroom climate of both ATAs and ITAs more favorably than did males on four of the five climate factors. However, an analysis of mean scores revealed that students' biological sex interacted with perceptions of classroom climate, on the Authority factor, such that male students held more positive perceptions of ITAs' than did females. In fact, this was the only climate factor for which male and female students did not rate ATAs more favorably than ITAs. It was also the only instance in which male students' perceptions of climate were more favorable than females.

Discussion

The findings revealed interesting differences in student perceptions of the climate in ITA and ATA classrooms, perhaps due to discrepancies between ITA and ATA approaches of establishing classroom climate. Certainly, the results indicate that ITA and ATA classrooms are different environments from the viewpoint of American undergraduates. Moreover, student perceptions of classroom climate differed significantly by TA type and by student sex. Existing literature has identified biological sex differences in TAs on teaching evaluations (Fitch & Morgan, 2003) as well as students' perceptions of TAs' teaching ability, social skills, and knowledge (Neves & Sanyal, 1991). Our research further investigated biological sex differences in perceptions of classroom climate by students and instructors. However, the sex of the TA was not found to have a main effect on student perceptions of climate. Interestingly, the MANOVA for the Classroom Climate Measure produced significant interaction effects, thus indicating the combination of all three independent variables must be taken into account. Interpretation of the

main effects should be viewed in light of the consequences of the interaction as the sex of students and TAs, as well as TA type, influence student perceptions of climate. Specifically, an interaction effect was found in the Authority factor, wherein male students rated ITAs more favorably than ATAs. This was the only climate factor on which either male or female students rated ITAs more favorably. Moreover, it was the only instance in which male students rated climate higher than females.

The results supported the hypothesis, which posited that student perceptions of classroom climate would differ significantly with ITAs as compared to ATAs. Students rated ATAs significantly higher in four of the five climate factors: Atmosphere, Deference, Equity, and Teaching Methods. Mean scores for Teacher Authority, while not significantly different, were also higher for ATAs than for ITAs. Students preferred ATAs' classroom climate to ITAs', possibly because they feel more comfortable in ATAs' classroom and respond to ATAs' teaching methods better than ITAs'. For RQ1, the data did not show any significant differences in student perceptions of climate based on TA sex. However, since the interaction effect for the Classroom Climate Measure was significant, TA sex cannot be ruled out as a factor in student perceptions of climate. For RQ2, the results show that male students reported significantly higher levels of Deference than female students, which means that males felt more comfortable and free to express their ideas in TA classrooms than did females. Meanwhile, although not statistically significant, females reported slightly higher mean scores on all the other four factors: Atmosphere, Equity, Teacher Authority and Teaching Methods.

Practical Implications

These results have implications for ITAs' teaching, the way student evaluations of ITAs are viewed, and how ITA training programs are designed. Previous research (e.g., Fox & Gay, 1994; Gorsuch, 2003, 2011) has focused on efforts made by ITAs to address poor teaching evaluations by students, and our study takes an alternative approach by focusing on students' perception of classroom climate. Those perceptions are determined by both the reality of the classroom climate as well as students' interpretation of that reality; therefore, our study provides a new way of examining the reasons for the lower evaluations that ITAs receive, in comparison to ATAs. The conclusions that can be drawn from these findings provide insight into how educators can help ITAs by better preparing students to the new cultural experiences and different pedagogical approaches employed in ITAs' classroom, which will eventually better prepare students for their future life and work in a more globalized environment.

First, student perceptions of ITAs' teaching effectiveness should be carefully considered. Given that students rate ITAs lower than ATAs on end-of-term evaluations (Smith et al., 2005) and in light of our finding that student perceptions of classroom climate are lower with ITAs as compared to ATAs, supervisors of ITAs ought to consider the preconceived dispositions that American undergraduates may hold which influence these evaluations. Yook's (1999) finding that American students are ethnocentric, culturally insensitive, and intolerant would suggest that caution be used when drawing conclusions about the quality of ITA instruction based upon student evaluations; thus, it is not surprising that ITAs receive lower ratings than their American counterparts. Any expectation otherwise seems blind to situations that may be beyond the control of ITAs.

Furthermore, our research suggests a need for intercultural training of American undergraduates. Many universities are bringing more TAs of diverse cultural backgrounds to campus. Without intercultural training, students can hardly appreciate and reap the benefits from

the diversity available to them in the classroom, may simply react based upon cultural preconceptions, and miss an important lesson in intercultural communication and appreciation of cultural differences. Thus, the researchers suggest bridging the cultural differences between American undergraduates and ITAs by providing training for students to help them appreciate the diversity of approaches to establishing classroom climate. Given that ITAs have been held to higher entrance standards and additional training, it seems reasonable to prepare students as well.

Finally, the methods ITAs use to establish classroom climate are important, as any actions on their part are likely to be magnified in the context of classroom management. For example, ITAs should create an easy conversational environment and reduce student anxiety, encourage students to focus on the whole context of the conversation, and, enlist the interpretive capabilities of the student listeners to screen performance errors (Davies & Tyler, 1994). In particular, improved ITAs' listening skills help them recognize and address the needs of their students more effectively (Yule, 1994). Both students and ITAs agree that reliability and encouragement are the most important aspects of effective teaching (Gokcora, 1989). Also, using instructor self-disclosure and creating opportunities for out-of-class communication are two specific and practical ways to influence student perceptions. American students prefer it when ITAs self-disclose about their native culture (Yook, 1999; Yook & Albert, 1999), employ interactive instructional strategies (Fox & Gay, 1994; Nelson, 1990), use classroom discussion, exercise teacher clarity, and incorporate interpersonal behaviors, which includes: being friendly and interactive, inviting student comments and questions, asking students questions, elaborating when explaining concepts, explaining the link between old and new information, making students' responsibilities clear, and using the chalkboard (Nelson, 1990). In addition, constructive intercultural conflict management, which uses cultural-sensitive communication skills to achieve conflict resolution in classroom interactions, may help address the classroom management concerns from a cultural perspective (Ting-Toomey, 1999).

Limitations and Suggestions for Future Research

One limitation to the present study is its descriptive nature. Although our findings illustrate how students may perceive ITAs differently than ATAs, the researchers did not test possible solutions to these differences. Future studies could investigate how cultural training for students might change their perceptions of ITAs' classroom climate. Another limitation is the use of only quantitative data about classroom climate. Future research could expand upon our findings by collecting qualitative data from both students and TAs about classroom climate. A third limitation is that the researchers only examined student perceptions, whereas future studies could examine how students might communicate or behave differently with ITAs as compared to ATAs. A final limitation is the inadequacy of classroom climate measures which account for cultural differences. Although the researchers were able to adapt items from existing scales to measure climate, a new and improved climate instrument should be developed in the future.

Conclusion

Our findings indicate that student perceptions of classroom climate differed significantly with ITAs as compared to ATAs and by the sex of the student. As ITAs are increasingly employed by colleges and universities in the United States, administrators, course directors, and those in charge of orientation training programs should cautiously examine American undergraduate student ratings of teaching evaluations in light of the reasons why student perceptions of ITAs

tend to be negative. Moreover, any reactions to student evaluations of ITA teaching should carefully consider proactive solutions that help students to appreciate cultural differences and assist ITAs in establishing an effective classroom climate that opens up a dialogue for cultural understanding with their students. Thus, student perceptions of classroom climate provide valuable information that can influence the instructional strategies utilized by ITAs as well as the training provided to ITAs prior to entering the classroom.

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Appendix

Table 1. *Descriptive Statistics for Student Climate Perceptions by TA Type*

Climate Factors	American TAs (<i>n</i> = 214)		International TAs (<i>n</i> = 241)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Atmosphere *	3.34	.55	3.09	.69
Deference *	1.42	.87	1.25	.83
Equity *	3.55	.64	3.34	.79
Teacher Authority	2.68	.93	2.56	.92
Teaching Methods *	2.55	.64	2.06	.72

Note. Higher means indicate more favorable perceptions on the classroom climate factors. Scores for the Atmosphere and Teaching Methods factors are based on a 4-point Likert-type semantic differential scale. Scores for the Deference, Equity, and Teacher Authority factors are based on a 5-point Likert-type scale (from 0 to 4). Factors with an asterisk are significantly different between groups (* $p < .05$).

Table 2. *Descriptive Statistics for Student Climate Perceptions by TA Sex*

Climate Factors	Male TAs (<i>n</i> = 231)		Female TAs (<i>n</i> = 224)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Atmosphere	3.21	.65	3.20	.64
Deference	1.43	.88	1.23	.82
Equity	3.39	.73	3.49	.73
Teacher Authority	2.58	.94	2.65	.91
Teaching Methods	2.31	.74	2.27	.72

Note. Higher means indicate more favorable perceptions on the classroom climate factors. Scores for the Atmosphere and Teaching Methods factors are based on a 4-point Likert-type semantic differential scale. Scores for the Deference, Equity, and Teacher Authority factors are based on a 5-point Likert-type scale (from 0 to 4).

Table 3. *Descriptive Statistics for Student Climate Perceptions by Student Sex*

Climate Factors	Males (<i>n</i> = 205)		Females (<i>n</i> = 250)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Atmosphere	3.18	.62	3.22	.66
Deference *	1.50	.91	1.20	.78
Equity	3.36	.78	3.51	.68
Teacher Authority	2.53	.94	2.68	.91
Teaching Methods	2.22	.71	2.35	.75

Note. Higher means indicate more favorable perceptions on the classroom climate factors. Scores for the Atmosphere and Teaching Methods factors are based on a 4-point Likert-type semantic differential scale. Scores for the Deference, Equity, and Teacher Authority factors are based on a 5-point Likert-type scale (from 0 to 4). Factors with an asterisk are significantly different between groups (* $p < .05$).